

## CLAIMS

1. A method for producing a carbonyl compound, which comprises reacting an oily solution of water-insoluble aliphatic alcohol with an aqueous hydrogen peroxide solution in the presence of a catalyst containing a metal compound belonging to Group 8 to 10 of the Periodic Table in a heterogeneous solution system.

2. The method according to claim 1, wherein the water-insoluble aliphatic alcohol is saturated aliphatic secondary alcohol, and the carbonyl compound is ketone.

3. The method according to claim 1, wherein the water-insoluble aliphatic alcohol is saturated aliphatic primary alcohol, and the carbonyl compound is aldehyde or carboxylic acid.

4. The method according to any one of claims 1 to 3, wherein the catalyst containing a metal compound belonging to Group 8 to 10 of the Periodic Table is a zero-valent metal catalyst.

5. The method according to any one of claims 1 to 4, wherein the zero-valent metal catalyst is platinum/carbon, platinum black, bis(dibenzylideneacetone)platinum, palladium/carbon, rhodium/carbon or ruthenium/carbon.